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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO.   |
|---|-------------|----------------------|---------------------|--------------------|
| 10/626,079  | 07/24/2003  | Robert Lombari       | 0263421-0040        | 9962               |
| 24280   | 7590        | 01/10/2005           | EXAMINER            |                    |
| Choate, Hall & Stewart<br>Exchange Place<br>53 State Street<br>Boston, MA 02109 |             |                      |                     | BRINSON, PATRICK F |
|   |             | ART UNIT             |                     | PAPER NUMBER       |
|   |             | 3754                 |                     |                    |

DATE MAILED: 01/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |
|------------------------------|------------------------|---------------------|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |
|                              | 10/626,079             | LOMBARI ET AL.      |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |
|                              | Patrick F. Brinson     | 3754                |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 24 October 2004.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-29 and 31 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-29 and 31 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) All    b) Some \* c) None of:
      1. Certified copies of the priority documents have been received.
      2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____.   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/1/04</u> | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____.                                   |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: There's no description of element #11 in the specification. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the subject matter recited in claim 5 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered

and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### *Claim Objections*

3. Claims 3 and 14 are objected to because of the following informalities: Claim 3 does not end with a period (.). Claim 14 recites "the tube" without proper antecedent basis. Appropriate correction is required.

#### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 5,732,741 to Shiry '741.

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The patent to **Shiery '741** discloses a pre-assembled water chamber assembly for an expansion tank comprising a pressure assembly (12) having an inlet and an outlet, first and second passage fittings (53, 53') providing fluidic communication between an exterior and interior of the case. Flow through assembly (16), having an interior and exterior and first and second ends sealingly connected to the inlet and outlet, respectively. A resilient diaphragm (14) is disclosed having a middle portion and first and second ends sealingly connected to the flow-through assembly. During use the interior diameter of the first and second ends of the diaphragm are smaller than the interior diameter of the middle portion and the space between the exterior of the flow through assembly and the interior of the diaphragm is in fluidic communication with the interior of the flow through assembly, as recited in claim 9. Fig. 1 discloses the middle portion of the diaphragm being configured to contact tube (16) at normal operating pressures, as recited in claim 14.

5. Claims 9 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by US 3,063,470 to **Forester**.

The patent to **Forester** discloses an expansion tank comprising a pressure assembly (1) having an inlet and an outlet, first and second passage fittings (16) providing fluidic communication between an exterior and interior of the case. Flow through assembly (7), having an interior and exterior and first and second ends

sealingly connected to the inlet and outlet, respectively. A resilient diaphragm (13) is disclosed having a middle portion and first and second ends sealingly connected to the flow-through assembly. During use the interior diameter of the first and second ends of the diaphragm are smaller than the interior diameter of the middle portion and the space between the exterior of the flow through assembly and the interior of the diaphragm is in fluidic communication with the interior of the flow through assembly, as recited in claim 9. Fig. 1 discloses the middle portion of the diaphragm being configured to contact tube (16) at normal operating pressures, as recited in claim 14.

*Claim Rejections - 35 USC § 103*

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, 10-13, 15-29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 3,063,470 to **Forester**.

The patent to **Forester** discloses a pressure assembly including tube (7) having first and second ends, first and second passage fittings (16) providing fluidic

communication between an interior and exterior of the pressure assembly. First and second collars (11) disposed at the first and second ends of the tubes, respectively, and a resilient diaphragm (13) having first and second ends, the diaphragm sealingly fitted around the first and second collars, respectively. In use, the first and second ends of the diaphragm having a smaller cross sectional area than a middle portion of the diaphragm. The tube includes a plurality of notches or apertures (8) that provide fluidic communication between an exterior of the tube and the interior of the diaphragm. Fig. 1 discloses a portion of at least one collar having an outer diameter that is approximately equal to an inner diameter of the diameter and the diameter of the diaphragm being substantially uniform along its length and greater than the diameter of the tube, as recited in claims 24 and 25. Fig. 3 discloses the diaphragm being configured to contact the tube at normal operating pressures, while fig. 2 discloses the diaphragm expanded due to increased fluidic pressure. The patent to **Forester** discloses the case (1) comprising a shell (15) having first and second end ring (14) welded to the first and second ends of the shell, respectively and first and second fittings attached to the first and second end ring. A valve system (3, 4, 5, 6) providing controllable fluidic communication between the exterior of the tank and a space between the metallic case and the diaphragm, wherein the valve is disposed in the wall of the end ring, as recited in claims 2, 11, 13 18, 20. **Forester** does not disclose the notches or apertures being open to the end of the tube or notches at the

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end of the tube. At the time the invention was made, it would have been an obvious design choice to a person of ordinary skill in the art to form the notches at the end of the tube and/or to open the notches to the end of the tube of **Forester** because Applicant has not disclosed that having the notches at the end or opened to the end of the tube provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the notches near the end as suggested by **Forester** because the notches near the end function equally to allow fluidic connection between the tube and the interior of the diaphragm. Therefore, it would have been an obvious matter of design choice to modify **Forester** to obtain the invention as specified in claims 1, 15, 22, 27 and 31. At the time the invention was made, it would have been an obvious design choice to a person of ordinary skill in the art to form the ends as domes that are welded to the shell or to form the assembly as two domes welded to one another because Applicant has not disclosed that these features provide an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the shell (15) welded to ring piece (14) and an H-shaped end screwed into the ring piece as suggested by **Forester**. Therefore, it would have been an obvious matter of design choice to modify **Forester** to obtain the invention as specified in claims 3, 4, 10, 12 and 17.

*Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Jenski, Jr. et al., Patton et al., Sugimura '176 and '077, Arendt, Hewitt et al., Sugimura et al. and Ellis are all pertinent to Applicant's invention in disclosing in-line expansion tanks including flexible diaphragms.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Patrick F. Brinson** whose telephone number is (703) 308-0111. The examiner can normally be reached on M-F 7:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Michael Y. Mar** can be reached on (703) 308-2087. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Patrick F. Brinson  
Primary Examiner  
Art Unit 3752

P. F. Brinson  
January 4, 2005